

## CLAIMS

What is claimed is:

1. A method for managing an uncorrectable data error (UE) as the UE passes through a plurality of devices in a central electronic complex (CEC), the method comprises the steps of:

- (a) detecting a UE-RE by at least one device in the CEC;
- (b) providing an attention signal by at least one device to a diagnostic system to indicate the UE-RE condition; and
- (c) analyzing the UE-RE attention signal by the diagnostic system to produce an error log with a list of failing parts and a record of the log.

2. The method of claim 1 wherein the UE can produce any of the following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt condition; and a SUE-CS condition.

3. The method of claim 2 wherein the SUE-mask condition does not need to be reported.

4. The method of claim 1 wherein the diagnostic system comprises a processor runtime diagnostic (PRD) code.

5. The method of claim 2 wherein the detecting step (a) comprises the steps of:

- (a1) detecting a UE-RE condition by a first device; and

3 (a2) detecting a special uncorrectable data error (SUE) condition by at least one  
4 other device at a later point in time, wherein the detection of the UE-RE condition by the first  
5 device produces a UE-RE condition and the detection of the SUE condition by the at least one  
6 other device produces a SUE-CS condition, wherein the UE-RE condition and the SUE-CS  
7 condition are processed at substantially the same time.

1 6. The method of claim 4 wherein the PRD code is within a service processor.

2 7. The method of claim 6 wherein the PRD code accesses each of the plurality of  
3 devices through an interface within the service processor.

4 8. The method of claim 7 wherein the interface comprises a JTAG interface.

5 9. A computer readable medium containing program instructions for managing an  
6 uncorrectable data error (UE) as the UE passes through a plurality of devices in a central  
7 electronic complex (CEC), the program instructions for:

- 8 (a) detecting a UE-RE by at least one device in the CEC;  
9 (b) providing an attention signal by at least one device to a diagnostic  
10 system to indicate the UE-RE condition; and  
11 (c) analyzing the UE-RE attention signal by the diagnostic system to  
12 produce an error log with a list of failing parts and a record of the log.

1 10. The computer readable medium of claim 9 wherein the UE can produce any of  
2 the following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt

condition; and a SUE-CS condition.

11. The computer readable medium of claim 10 wherein the SUE-mask condition does not need to be reported.

12. The computer readable medium of claim 9 wherein the diagnostic system comprises a processor runtime diagnostic (PRD) code.

13. The computer readable medium of claim 10 wherein the detecting step (a) comprises the steps of:

(a1) detecting a UE-RE condition by a first device; and

(a2) detecting a special uncorrectable data error condition (SUE) condition by at least one other device at a later point in time, wherein the detection of the UE-RE condition by the first device produces a UE-RE condition and the detection of the SUE by the at least one other device produces a SUE-CS condition, wherein the UE-RE condition and the SUE-CS condition are processed at substantially the same time.

14. The computer readable medium of claim 12 where in the PRD code is within a service processor.

15. The computer readable medium of claim 14 wherein the PRD code accesses each of the plurality of devices through an interface within the service processor.

16. The computer readable medium of claim 15 wherein the interface comprises a

JTAG interface.

17. A service processor for managing an uncorrectable data error (UE) as the UE passes through a plurality of devices in a central electronic complex (CEC), the service processor comprises:

an attention handler for detecting a UE-RE by at least one device in the CEC and providing an attention signal by at least one device to indicate the UE-RE condition; and

a diagnostic system for receiving the attention signal and for analyzing the UE-RE attention signal to produce an error log with a list of failing parts and a record of the log.

18. The service processor of claim 17 wherein the UE can produce any of the following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt condition, and a SUE-CS condition.

19. The service processor of claim 18 wherein the SUE-mask condition does not need to be reported.

20. The service processor of claim 17 wherein the diagnostic system comprises a processor runtime diagnostic (PRD) code.

21. The service processor of claim 18 wherein the attention handler detects a UE-RE condition by a first device, and detects a special uncorrectable data error checkstop (SUE-CS) condition by at least one other device at a later point in time, wherein the UE-RE condition and the SUE-CS conditions are processed at substantially the same time.

1           22.     The service processor of claim 20 wherein the PRD code accesses each of the  
2           plurality of devices through an interface within the service processor.

1           23.     The service processor of claim 22 wherein the interface comprises a JTAG  
2           interface.

1           24.     A method for managing an uncorrectable data error (UE) as the UE passes  
2           through a plurality of devices in a central electronic complex (CEC), the method comprises the  
3           steps of:

4           (a)     detecting a UE-RE condition by at least one device in the CEC wherein the  
5           detecting step (a) comprises the steps of: (a1) detecting a UE-RE condition by a first device;  
6           and (a2) detecting a special uncorrectable data error (SUE) condition by the at least one other  
7           device at a later point in time, wherein the detection of the UE-RE condition by the first device  
8           produces a UE-RE condition and the detection of the SUE condition by the at least one other  
9           device produces a SUE-CS condition, wherein the UE-RE condition and the SUE-CS  
10          conditions are processed at substantially the same time;

11          (b)     providing an attention signal by at least one device to a processor runtime  
12          diagnostic (PRD) code to indicate the UE-RE condition, wherein the PRD accesses each of the  
13          plurality of devices through an interface within the service processor; and

14          (c)     analyzing the UE-RE attention signal by the diagnostic system to produce an  
15          error log with a list of failing parts and a record of the log.

1           25.     The method of claim 24 wherein the UE can produce any of the following  
2           conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt condition; and a SUE-  
3           CS condition.

1           26.    The method of claim 25 wherein the SUE-mask condition does not need to be  
2 reported.

1           27.    The method of claim 26 wherein the PRD code is within a service processor.

1           28.    The method of claim 27 wherein the interface comprises a JTAG interface.

1           29.    A computer readable medium containing program instructions for managing an  
2 uncorrectable data error (UE) as the UE passes through a plurality of devices in a central  
3 electronic complex (CEC), the program instructions for:

4           (a)    detecting a UE-RE condition by at least one device in the CEC wherein the  
5 detecting step (a) comprises the steps of: (a1) detecting a UE-RE condition by a first device;  
6 and (a2) detecting a special uncorrectable data error (SUE) condition by the at least one other  
7 device at a later point in time, wherein the detection of the UE-RE condition by the first device  
8 produces a UE-RE condition and the detection of the SUE condition by the at least one other  
9 device produces a SUE-CS condition, wherein the UE-RE condition and the SUE-CS  
10 conditions are processed at substantially the same time;

11           (b)    providing an attention signal by at least one device to a processor runtime  
12 diagnostic (PRD) code to indicate the UE-RE condition, wherein the PRD accesses each of the  
13 plurality of devices through an interface within the service processor; and

14           (c)    analyzing the UE-RE attention signal by the diagnostic system to produce an  
15 error log with a list of failing parts and a record of the log.

1           30.     The computer readable medium of claim 29 wherein the UE can produce any of  
2     the following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt  
3     condition; and a SUE-CS condition.

1           31.     The computer readable medium of claim 30 wherein the SUE-mask condition  
2     does not need to be reported.

1           32.     The computer readable medium of claim 31 wherein the PRD code is within a  
2     service processor.

1           33.     The computer readable medium of claim 32 wherein the interface comprises a  
2     JTAG interface.

1           34.     A service processor for managing an uncorrectable data error (UE) as the UE  
2     passes through a plurality of devices in a central electronic complex (CEC), the service  
3     processor comprises:

4                 an attention handler for detecting a UE-RE by at least one device in the CEC and  
5     providing an attention signal by at least one device to indicate the UE-RE condition, wherein  
6     the attention handler detects a UE-RE condition by a first device, and detects a special  
7     uncorrectable data error checkstop (SUE-CS) condition by at least one other device at a later  
8     point in time, wherein the UE-RE condition and the SUE-CS conditions are processed at  
9     substantially the same time; and

10                a processor runtime diagnostic (PRD) code for receiving the attention signal and for

11 analyzing the UE-RE attention signal to produce an error log with a list of failing parts and a  
12 record of the log, wherein the PRD accesses each of the plurality of devices through an  
13 interface within the service processor.

1 35. The service processor of claim 34 wherein the UE can produce any of the  
2 following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt condition,  
3 and a SUE-CS condition.

1 36. The service processor of claim 35 wherein the SUE-mask condition does not  
2 need to be reported.

1 37. The service processor of claim 36 wherein the interface comprises a JTAG  
2 interface.

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